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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,922	02/14/2001	Kari Einamo	PM 277084	1058

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EXAMINER

CHO, UN C

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 11/20/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/762,922

Applicant(s)

EINAMO, KARI

Examiner

Un C Cho

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 6) ☐ Other: \_\_\_\_\_.

***Specification***

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

***Drawings***

2. The drawings are objected to because one of the elements in figure 5 states "ML" but the specification mentions "monitoring table MT" instead. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 – 5, 7 – 8 and 10 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Sanmugam (WO 00/119020).

Regarding claim 1, Sanmugam teaches a method of subscriber activity in a radio communications network which comprises functional entities for subscriber mobility management, the method comprising transmitting and receiving signalling messages in a functional entity, characterized by receiving a trace command in said functional entity, the command indicating the tracer and identifying the particular subscriber to

be traced, starting tracing which comprises the steps of: copying a signalling message in response to the reception or transmission of a signalling message related to the subscriber to be traced, and sending a copy to the tracer (pg. 45, line 12 – pg. 48, line 3).

Regarding claim 2, Sanmugam teaches that the trace command can select the type of activity to be traced, and the signalling message is copied only if it is of the type of activity to be traced (pg. 45, line 12 – 14; pg. 47, line 35 – pg. 48, line 3).

Regarding claim 3, Sanmugam teaches that tracing starts whenever the subscriber activity is selected for tracing and the subscriber's tracing class is activated (pg. 46, line 22 - 26).

Regarding claim 4, Sanmugam teaches that tracing stops when MSC deactivates tracing for mobile subscriber (pg 48, line 21 - 35).

Regarding claim 5, Sanmugam teaches that tracing is deactivated by operator commands (pg 46, line 31 - 33).

Regarding claim 7, Sanmugam teaches a radio communication network comprising subscribers, at least some of the subscribers being able to roam within the coverage area of the system, one or more network elements (MSC, VLR, HLR) in which signalling messages are received and transmitted to manage subscriber mobility, operating means for giving instructions to the network element, characterized in that the operating means are arranged to give a trace command to the network element (MSC, VLR, HLR), the command indicating the

tracer and identifying at least one subscriber whose signalling messages are to be traced, the network element (MSC, VLR, HLR) is arranged to copy signalling messages related to the subscriber in response to the trace command and to send a copy to the tracer (pg. 45, line 12 – pg. 51, line 25).

Regarding claim 8, Sanmugam teaches the trace command also indicates the type of the signalling message to be traced, and the network element (MSC, VLR, HLR) is arranged to copy the signalling message related to the subscriber to be traced if it is of the type to be traced (pg. 47, line 2 – 4 and pg 50, line 4 - 31).

Regarding claim 10, Sanmugam teaches a network element of a radio communication network which receives and transmits signalling messages to manage subscriber mobility, characterized in that the home system comprises reception means for receiving a trace command, which indicates the tracer and identifies at least one subscriber whose signalling messages are to be traced, separation means for separating the signalling messages of the subscriber to be traced from other signalling messages, copying means for copying the signalling messages related to the subscriber to be traced, and transmission means for sending copies to the tracer (pg. 47, line 1 - 26).

Regarding claim 11, Sanmugam teaches the trace command also indicates the type of activity to be traced, and the separation means are arranged to separate the signalling messages that belong to the activity of the type to be

traced from the signalling messages of the subscriber to be traced (pg. 47, lines 1 – 4 and 19 - 26).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6, 9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanmugam in view of Fletcher et al (US0000019212H).

Regarding claim 6, Sanmugam teaches tracing of signaling message. However, Sanmugam fails to teach that the signalling messages of the MAP protocol are traced. In contrast, Fletcher teaches that messages between the VLR and an external HLR utilize MAP protocol interface (Col. 18, line 31 – 39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Fletcher to Sanmugam to provide software entities that correspond with equipment and components of conventional telecommunication systems, and to provide for effective communication and cooperation between such elements.

Regarding claim 9, Sanmugam teaches that the signalling messages to be traced are type of activities, and the network element is arranged to start copying of the signalling messages related to the subscriber. However Sanmugam fails to teach that signalling messages to be traced are of the MAP protocol and that the

network element is arranged to start copying of the signalling messages related to the subscriber in response to the dialogue of the MAP protocol, which starts after the trace command and is related to the subscriber to be traced. In contrast, Fletcher teaches that messages between the VLR and an external HLR utilize MAP protocol interface (Col. 18, line 31 – 39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Fletcher to Sanmugam to provide software entities that correspond with equipment and components of conventional telecommunication systems, and to provide for effective communication and cooperation between such elements.


Regarding claim 12, Sanmugam teaches that the network element is responsive for the reception, separation, copying and transmission means. However, Sanmugam fails to teach that the network element comprises an MAP entity. In contrast, Fletcher teaches that messages between the VLR and an external HLR utilize MAP protocol interface (Col. 18, line 31 – 39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Fletcher to Sanmugam to provide software entities that correspond with equipment and components of conventional telecommunication systems, and to provide for effective communication and cooperation between such elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C Cho whose telephone number is (703)305-8725. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703)308-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Un C Cho *UC*  
Examiner  
Art Unit 2682

  
Lee Nguyen  
Primary Examiner